

Journal Digest

In children receiving antibiotics, does coadministration of *Lactobacillus* GG reduce the incidence of diarrhea?

Vanderhoof JA, Whitney DB, Antonson DL, et al. *Lactobacillus* GG in the prevention of antibiotic-associated diarrhea in children. *J Pediatr* 1999;135:564-568.

DESIGN

Randomized, placebo-controlled trial with 10 days of follow-up.

PATIENTS

A total of 202 children in Rapid City, SD between 6 months and 10 years of age who had an acute infection of the upper or lower respiratory tract, urinary tract, soft tissues, or skin and for whom a 10-day course of antibiotics was prescribed. Exclusion criteria were chronic disease, serious acute infection, or diarrhea at the start of antibiotic administration. A total of 188 children (93%) (median age, 4 years; 55% girls) completed the study.

INTERVENTION

Children were allocated to receive *Lactobacillus* GG (CAG Functional Foods, Omaha, NE) (n=93) or placebo (n=95). Children who weighed less than 26 lb (<12 kg) took 1 capsule (10^{10} colony-forming units of live *Lactobacillus* GG) daily with meals, and those who weighed 26 lb or more (≥ 12 kg) took 2 capsules (2×10^{10} colony-forming units).

MAIN OUTCOME MEASURES

Incidence of diarrhea (≥ 2 liquid stools per day on ≥ 2 occasions), stool frequency, and stool consistency (rated on an 8-point scale: 1=watery, 4=loose and soft, and 8=hard and dry).

RESULTS AND CONCLUSIONS

Fewer children who received *Lactobacillus* GG had diarrhea than did those who received placebo ($P < 0.001$) (table). The mean duration of diarrhea was slightly shorter in the group receiving *Lactobacillus* GG than in the placebo group (4.7 vs 5.9 days, $P = 0.05$). By day 10, stool frequency was lower in the *Lactobacillus* GG group than in the placebo group (mean number of stools per day, 1.4 vs 2.0; $P < 0.02$). By day 7, fewer children who received *Lactobacillus* GG had a stool consistency score of less

than 4 than did patients who received placebo ($P < 0.001$) (table). Coadministration of *Lactobacillus* GG can reduce the incidence and duration of diarrhea, stool frequency, and watery or soft stool consistency in children treated with antibiotics.

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Lactobacillus GG (LGG) versus placebo for diarrhea in children
receiving antibiotic therapy for 10 days*

Outcomes	LGG	Placebo	RRR (95% CI)	NNT (CI)
Diarrhea	8	26	71 (39-87)	6 (4-13)
Stool consistency <4†	17	48	64 (43-78)	4 (3-6)

RRR = relative risk reduction, NNT = number needed to treat, and CI = confidence interval.

*Data are percentages and have been calculated from data in the article.

†Stool consistency score <4 means that stool consistency ranged from loose and soft to watery.